

Community Address	Name of Project	
	DNR P&S Approval Number	WPDES Permit Number
	Clean Water Fund Loan Number	Grant Number
	Manual Prepared By	

Page Number Completeness (S=Satisfactory; Inc.=Incomplete; N/A=Not Applicable)
S Inc. N/A

I. GENERAL INFORMATION

A. Table of Contents

B. Introduction - Purpose and Use of the Manual

C. Tabbed List

1. Emergency telephone numbers and addresses

2. Telephone number, address, contact person

a. Utilities

b. DNR district, area and central office

D. Staffing

1. Line diagram showing each position

2. General description of responsibility of each position

3. Qualifications required for each position

II. SAFETY

A. Introduction - Purpose and General discussion of Safety

B. Discussion of General Safety - Hazards

1. Physical Injuries

a. Tool transfer

b. Proper clothing (hard hats, boots, gloves, eye protection, etc.)

c. Ladders used for manhole entry

d. Tripping, slipping, balance, etc.

2. Pathogens

a. National Health Service recommended inoculations and schedule

b. Innoculation policy and procedure

3. Noxious and Toxic Gases and Oxygen Deficiency - properties, physiological effects, symptoms, source, mitigative measures, refer to list of dangerous locations

a. Oxygen concentration requirements

b. H₂ S

c. Methane

d. CO₂

e. CO

f. CL₂

g. Gasoline and petroleum

h. Hydrogen

i. Nitrogen

4. Electrical Safety

a. Lockout procedure

b. Electrical equipment usage (tools, generators)

5. Explosion or fire

a. Conducive atmosphere in sewer procedures

b. Mitigative

6. Chemical Safety

a. Root control chemicals

b. Cleaning and grease solvent chemicals

c. Chlorine or peroxides if used for septic conditions

Page Number	S	Inc.	N/A	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Equipment Safety (general)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a. Air tools
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. Rotating equipment
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	c. Striking tools
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	d. Motor vehicles
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Discuss and Reference Safety Equipment List
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a. Changes or additions to list (how to make changes)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. List locations of list and who has the update responsibility
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. Accident Report
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a. Explain accident reporting procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. Example filled out copy of accident report
				C. Safety Program
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Job Safety Instruction
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a. Meetings
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. Classes
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	c. Tests and exams
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	d. Drills
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	e. First aid courses
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Cleanliness and Health
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a. Policies
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. Procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	c. Innoculations
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	d. Laundry
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	e. Personal hygiene
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Specific Safety Procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a. Initial worksite set-up and protection
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Traffic signals, cones, barricades
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2) Vehicle placement
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. Facility entry and exit
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Atmosphere testing
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2) Ventilation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3) Harness and lifeline
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4) Entry method (including manhole or wetwell washdown)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5) Tools and equipment (transfer)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6) Exit method
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7) Communications
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8) Emergency rescue
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9) Conformance with DILHR and OSHA regulations
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	c. Maintenance of electrical equipment
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Lockout procedure
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2) Insulation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3) Knowing when to get an electrician
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	d. Procedures when explosive or fire prone atmosphere is discovered
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Fire department notification
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2) Site and personnel protection
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	e. Safe maintenance of mechanical equipment (reference specific O&M material)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Rotating equipment
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2) Heavy equipment
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3) Power driven equipment
				III. OPERATION AND MAINTENANCE (Not required for draft acceptance)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. Sewers and Manholes
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Functional description of system (may refer to maps and general description)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Normal operation, alternative operation and emergency operation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Inspections
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Maintenance tasks, schedules and procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Emergency repair procedures and procedures for obtaining outside help
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Trouble shooting guide (table format)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Safety associated with tasks

Page
Number S Inc. N/A

	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Lift Stations
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Function, location and description of lift stations
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Schematic drawing
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Normal operation, startup, alternate operation and emergency operation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Maintenance tasks, schedules and procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Emergency repair procedures and procedures for obtaining outside help
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Trouble shooting guide (table format)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Safety associated with tasks
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C. Sewer Cleaning Equipment
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Function, location of sewer rodders, balls, kites, buckets and/or flushing equipment (each unit)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Emergency repair procedures and procedures for obtaining outside help
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Trouble shooting guide (table format)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Safety associated with tasks
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D. Safety Equipment
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Tasks and procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Personnel assigned to each task
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Schedules by which tasks are done
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Trouble shooting guide (table format)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E. Emergency Generators and Pumps
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Functional description, location and procedures
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Startup and normal operation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Emergency repair procedures and procedures for obtaining outside help
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Trouble shooting guide (table format)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Safety associated with tasks
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F. Appurtenances (inverted siphons, chlorinators, air relief valves, telemetering equipment, etc.)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Functional description, schematics and location
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Normal operation, alternate operation and emergency operation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Mechanical and/or electrical components
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Trouble shooting guide (table format)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Safety associated with tasks
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IV. APPENDICES (Not required for draft acceptance)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. Sewer Ordinance and User Charge System
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Conversion Factors, Glossary and Abbreviations
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C. MOP #1 and MOP #7
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D. Other References and Location (safety, job related and trade journals and magazines)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E. Inspection Forms (sewers, manholes, lift stations, etc.)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F. Maintenance and Repair Forms (sewers, manholes, lift stations, etc.)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G. Sewer System Map
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H. Summary of Purchase Order System and Forms
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I. Summary of Equipment Inventory Systems and Forms
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	J. Summary of Mutual Aid System (formal and informal)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	K. List of Known or Suspected Dangerous Locations, Danger and Mitigative Actions
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L. List of Manufacturers O&M Manuals and Location
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M. List of Equipment and Material Suppliers and Service Representatives with Address and Telephone Number (tabbed)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N. List of Safety Equipment and Respective Location (tabbed)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	O. Vulnerability Analysis in Table Format (catastrophe, problem and mitigative measures)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	V. FORMAT
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. Text Written to Operator
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Manual is an Instructional Tool
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C. Manual is Organized and Makes Sense
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. General information and discussion
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Inspection, operation and maintenance sections including specific safety procedures and concerns
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. Appendices
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D. Will User Find Manual Helpful (satisfactory)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E. Index Tabs
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F. Comments _____

We certify that, to the best of our knowledge, the O&M Manual developed for the project stated on page 1 of this form meets or exceeds the State requirements for such a document.

Project Engineer's Signature	Date Signed
	Title
Authorized Representative's Signature	Date Signed
	Title

I certify that I have reviewed the O&M Manual developed for the project stated on page 1 of this form and find that the section meets the training and information requirements for this facility.

Facilities Certified Operator's Signature	Date Signed
	Title

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Name of DNR Reviewer	Date Received
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This certification has been reviewed by me and is acceptable.

Reviewer's Initials	Date Reviewed
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